Products

TEST KITS

- Alkalinity Test Kits
- Aluminum Test Kits
- Amines, Filming Test Kits
- Ammonia Test Kits
- Bromine Test Kits
- Calcium (see Hardness) Test Kits
- Carbohydrazide Test Kits
- Carbon Dioxide (dissolved) Test Kits
- Chemical Oxygen Demand (COD) Vials
- Chloride Test Kits
- Chlorine Dioxide Test Kits
- Chlorine Test Kits
- Chromate (hexavalent) Test Kits
- Conductivity Meter
- Copper (soluble) Test Kits
- Cyanide (free) Test Kits
- DEHA Test Kits
- Detergents (anionic surfactants, MBAS) Test Kits
- Filming Amine (aliphatic amine) Test Kits
- Fluoride Test Kits
- Formaldehyde Test Kits
- Glycol Test Kits
- Hardness Test Kits
- Hydrazine Test Kits
- **Hydrogen Peroxide Test Kits**
- Hypochlorite (see Chlorine) Test Kits
- Iron Test Kits
- Manganese Test Kits
- Mercaptobenzothiazole (MBT) Test Kits
- Molybdate Test Kits
- Nitrate Test Kits
- Nitrite Test Kits
- Oxygen (Dissolved) Test Kits
- Ozone Test Kits

Hydrogen Peroxide Test Kits

Visual Kits

Range	MDL	Method	Kit Catalog No.	Refill Catalog No.
0-0.5 ppm	0.025 ppm	DPD	K-5502	R-5502
0-0.8 & 1-10 ppm	0.05 ppm	Ferric Thiocyanate	K-5510	R-5510
0-25 & 30-300 ppm	5 ppm	Ferric Thiocyanate	K-5510D	R-5510D
0-50 & 60-600 ppm	10 ppm	Ferric Thiocyanate	K-5510A	R-5510A
0-100 & 120-1200 ppm	20 ppm	Ferric Thiocyanate	K-5510B	R-5510B
0-1000 & 1200-12,000 ppm	200 ppm	Ferric Thiocyanate	K-5510C	R-5510C
0.1-1.0% (up to 20% with dilution)	0.10%	Ceric Sulfate Titrant with Ferroin Indicator	K-5530	

Instrumental Kits

Range	Method	Kit Catalog No.
0-3.00 ppm	DPD	K-5513
0-6.00 ppm	Ferric Thiocyanate	K-5543
0-6.00 ppm	Ferric Thiocyanate	I-2016

Methods

Hydrogen peroxide is a strong oxidizing agent with a variety of uses. Applications include the treating of industrial effluents and domestic waste and serving as a disinfectant in aseptic packaging.

For the food and beverage industry, CHEMetrics Hydrogen Peroxide CHEMets® and Vacu-vials® products are used extensively to monitor sterilization solutions in the packaging and sanitizing processes.

The Ferric Thiocyanate Method

Reference: D. F. Boltz and J. A. Howell, eds., Colorimetric Determination of Nonmetals, 2nd. ed., Vol. 8, p. 304 (1978).

The ferric thiocyanate method consists of ammonium thiocyanate and ferrous iron in acid solution. Hydrogen peroxide oxidizes ferrous iron to the ferric state, resulting in the formation of a red thiocyanate complex. Chlorine will not interfere with this method. Ferric iron and peracetic acid will interfere. Results are expressed as ppm (mg/L) H_2O_2.

Hydrogen Peroxide Analysis in the Presence of Peracetic Acid

The DPD Method

References: USEPA Methods for Chemical Analysis of Waters and Wastes, Method 330.5 (1983). APHA Standard Methods, 21st ed., Method 4500-Cl G (2005). D.F. Boltz and J.A. Howell, eds., Colorimetric Determination of Nonmetals 2nd ed., Vol. 8, p. 303 (1978).

With the DPD Method, hydrogen peroxide reacts with DPD (N, N-diethyl-p-phenylenediamine) in the presence of potassium iodide and ammonium molybdate to form a pink color. Various oxidizing agents such as halogens, ozone, and peracetic acid will produce high test results. Results are expressed as ppm (mg/L) H_2O_2.

The Ceric Sulfate Titrimetric Method

Reference: Developed by CHEMetrics, Inc.

CHEMetrics developed a titrimetric method using ceric sulfate as the titrant and ferroin as the end point indicator. A color change from green to orange signals the end of the titration. Results are expressed as percent (%) H_2O_2. The test range can be modified by

Peracetic Acid Test Kits
Persulfate Test Kits
pH Meter
Phenols Test Kits
Phosphate, ortho Test Kits
Silica Test Kits
Sulfate Test Kits
Sulfide Test Kits
Sulfite (free) Test Kits
Thiosulfate Test Kits
Total Dissolved Solids (TDS)
Zinc Test Kits
INSTRUMENTS
ACCESSORIES / COMPARATORS

performing a sample dilution. Details are provided in the kit instructions for ranges of 0.01 - 0.1% through 2- 20%.